

Aviation News

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AUGUST 21, 1944



Marks Ten Years as Airline Head: Jack Frye, president of TWA, forecasts transport speeds of 425 mph. and vast employment opportunities in world-wide air routes for lines now engaged in domestic operations. Speaking at Kansas City dinner in his honor, he envisioned planes replacing Constellation with New York-Kansas City hops in 2½ hours.

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Cutback Procedure Poses Problem

Sudden cancellations upset production programs, bring wave of voluntary quits and prevent management planning.....Page 7

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U. S., Soviet Agree on World Body

State Department announces completion of first of series of conferences with Russia; India, Belgium talks to open....Page 36

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Nelson Order Called Positive Step

Washington observers see "spot authorization" move as a prelude to action on reconversion.....Page 15

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Mexico OK's New Braniff Routes

Company, granted 3,067 mile operation, is fourth U. S. carrier to enter Mexican operations and second in last year.....Page 42

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B-29 Gets Record Factory Space

Large scale production of Superfortresses swings into full operation with numerous plants converted.....Page 30

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Aluminum Still Top Plane Material

Magnesium, steel, wood and plastics to figure largely with trend toward utilization of all types.....Page 13

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Release Study of Carrier Taxes

Report traces main aviation taxes to net income, motor fuel and payrolls; cites large railroad property levies.....Page 35

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Reveal Foreign Trans-Pacific Plans

New Zealand and Canadian prime ministers disclose negotiations for establishment of service.....Page 45

Micarta antenna masts to
"HIT THE BREEZE"
 at 600 mph!

That thin, long mast sticks outside in the fury of a 600 mph gale. It is made of Micarta—the light, tough aviation plastic. Requirements for antenna mast performance are exacting. The mast must withstand extremes of air pressure and temperature. It must be rigid, hold the antenna taut without yield or wobbling. Because Micarta combines maximum strength with light weight, it is now used in the antenna masts of Navy Grumman planes.

MICARTA has high dielectric strength... ideal for this type of nonconducting application.

MICARTA weighs approximately one-half as much as aluminum of equal strength, helps eliminate superfluous weight in the plane.

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MICARTA can be molded to best airfoil design... one-piece construction.

Micarta's unusual combination of characteristics has been the basis for the selection of many aircraft parts. If you are looking for lighter weight, high strength and resistance to wear and corrosion, write for your copy of the new Micarta Data Book B-3184-A. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., Dept. 7-N.

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FOR INFORMATION OR ORDER



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ARMED AND DANGEROUS made of the new Micarta "M4" grade antenna masts by one firm process. It is thin, light, strong, easily assembled and requires little



EDGE BACKS have been successfully installed with Micarta... through an excellent example of Micarta's strength and the skill of Westinghouse engineers in creating molding techniques.

THE AVIATION NEWS

Washington Observer

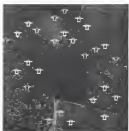
CUTBACK CONFUSION—The latest cutback confusion is only one facet of a deepening conflict in Washington between civilian and military groups for dominance of the national economy. The military men are reluctant to relinquish the power they have built up in the war period and shows signs of attempting to keep as much as possible. Isolated incidents are not particularly startling, but added together they indicate some tough scraps ahead.

SOME ROUGH WEATHER SIGNS—With Chairman Donald M. Nelson went over the heads of Army big-wigs in his unprecedented request to the Joint Chiefs of Staff, asking that top strategy board to examine Army production demands to determine whether huge reserve stocks aren't enough in view of the war situation, the military won a round in getting War Manpower Commission veto-power over War-approved civilian production, WMC being more amenable to Army influence. Army is increasing its effort to obtain utilization of the services, wants blank check authority on details and wants to cut the powers of civilian secretaries. Congressional intervention is relaxing both on literature dealing with political subjects, chief issue not being the law itself but Army interpretation which has been termed "unreasonable" by Senator Taft, surplus property disposal bill before Congress reverts past procedure and would put disposition of surplus in civilian hands as soon as the war is over. Speculators want control of war stockpile of material in civilian hands, seen it a fundamental and fatal flaw. It will be a bitterly fought issue, too.

POST-WAR V-MAIL—Various sources have suggested that V-mail service be continued after the war. Experienced observers in the Post Office Department say they do not believe either business or personal correspondents would patronize it; they like to send their letters. There will be no need to conserve transportation space. Before the war, however, there was a gradual increase in the use of microwave transmission of documents, drawings, etc., mostly by air mail. Use of V-mail during the war probably has increased public awareness of such procedure.

RETURN OF AIRPORTS—Return by the Army and Navy of militarized airports to civilian operation will soon be a matter of public discussion, and possible action. Civil Aeronautics

Administration built an undecoded number of Class 4 fields for military use, which, however, were as limited as to serve large municipalities on the surface system. Some of the fields were intended to accommodate operations in existing aviation, and were never used. It is understood that some have been put on a stand-by status after being closed. When the services feel that they are ready to turn them over to municipal



P-38's off to photograph invasion

control, there will still be the problems of manpower, equipment, and aviation-type facilities to put them into operation. The town of San José, Fla., has an airport just released by the Navy, and is inquiring for an operator.

FLYING BAN—Fixed base and school operators are looking for the answer to perplexing questions. Why can some of them, in some parts of the country, do a capacity business in training and transporting civilian students and passengers, while others, particularly on the seaboard, are afraid even to advertise for business lest they run afoul of the War Relocation Administration or the War Production Board or the Office of Price Administration or the Army. Apparently, they say, the ban on flying in the restricted zone is the only order that actually prevents fixed base operations. Many of them are calling for an affirmative order—authorizing them to go ahead. They feel that their employment capacity is im-

PAINT OUT THE TARGET



In the same hour of every American advance, "paint out the target" means paint. First out the enemy's targets—our guns... trucks... tanks... planes... railways... whole villages and towns!

This new kind of landscape painting isn't careful or sparing. You're betting paint against American lives. You spray it on, blow it on, dump it on.

At the "University of Petaluma," Shell's research laboratories, scientists combed through the vast number of products, by-product, and "waste products" of refining, looking for "the making" of camouflage paint.

They didn't find it ready-made—they went to work. Now, from a military by-product, Shell is producing petroleum resins, by the thousands of barrels, for camouflage.

Thus—one more outstanding contribution to America's war effort from Shell.

Shell was first, too, to supply American military aviation with a super fuel—100 octane gasoline—giving our planes new speed, flying range, and tactical advantage. Later Shell discoveries vastly increased both the power and production of aviation gasoline.

Today, more Shell 100 octane aviation fuel is supplied to aircraft engine manufacturers, for critical test and turbo purposes, than any other brand.

Frightened airport operators will find Shell's wartime popularity a profitable peacetime asset.



BETTER FUELS FOR THE AGE OF FLIGHT

AVIATION NEWS • August 21, 1944

Cutback Procedure Presents New Problems to Plane Industry

Sudden cancellations upset production programs, being wave of voluntary quits where men are needed and prevent management planning, manufacturers report; say unexpected terminations nullify say-on-the-job campaigns.

By SCOTT HERSHEY

Sharp differences between military and civilian officials in Washington over procedure in announcing production cutbacks puts the aircraft industry—management and labor alike—strutted in the middle on such delicate shifts as recently reported by the War Department to WPA's Production Executive Committee.

The question of procedure in such cases as those involving the C-47 Commando, the B-24 Liberator and the P-47 Thunderbolt, was argued at length by top officials before the announcement was made. The announcement brought the aircraft industry up short by its suddenness, since most of those concerned had no advance notice of the schedule changes and their reaction was not a kindly one.

Surprise—WPA officials indicated in a statement about two months ago that all aircraft cutbacks con-

templated for 1944 had been made and the industry was proceeding on that basis. While reductions in aircraft production were inevitable, the industry would have received the cutback notices with better notice if they had had some previous warning and been able to plan accordingly.

Not only did the sudden announcement have bad effects at the plants concerned, but more serious is the definite possibility that other plants not directly involved will see an increase in employment termination. Many of them are in the midst of campaigns to keep workers on the job until the war program is completed and their campaigns are running into difficulties as a result of the cutback procedure.

1944 Schedules Little Changed—It is estimated that the changes in production will not cut existing

schedules more than 3.6 percent for 1944, although a continued downward trend will be emphasized next year unless there is a sudden turn for the worse in the military campaign, a situation which even the most conservative do not now think likely.

The industry was at some loss to understand the operations of WPA's Production Executive Committee in this instance. This committee was set up with the announced purpose of coordinating all production cutbacks amounting to more than \$1,000,000, to pave the way for such cutbacks and either to consult with the manufacturer or have the procurement agency involved consult with the manufacturer regarding cutback procedure. The only answer PEC has to questions is that it had no warning.

Basic Difference—The reason, in the opinion of Washington observers, is the basic difference between military and civilian officials on this question. It is the opinion of many high military officials that it is impossible to have a hard procedure for advance notification of cutbacks. They believe, further, that no notification should be given until the last possible moment on the theory that advance notification slows down production.

The opinion of most high civilian



B-17 CARRIES ITS OWN LIFEBOAT:

Center photo shows new all-plywood water-powered lifeboat, now in mass production for use as heavy bombers on long overwater flights, being dropped by Flying Fortress at 800 feet. A few seconds later three parachutes open to let it glide down to a safe landing. Automatic devices set off smoke pots to help survivors spot the boat in rough weather and two rockets

with 120-yard buoyant lines fired outward from each side, to be used by survivors to pull themselves to the rescue craft. Left photo shows how boat is fired snugly to fuselage, where it falls speed only 5 mph. Right photo shows craft fitted with net and provisions for 1,500 mile voyage, 600 miles of which can be made under motor power.

officials and industry executives is that sudden and unexpected announcements not only slow down production at the plants concerned, but also has an effect on the output at other plants not involved and, furthermore, neither management nor labor has time to plan for the change.

Job Terminations Problem—In the view of many industry leaders, the possibility of increased job terminations in plants not involved as one of the most serious problems arising from the cutback program and some are fearful that the suddenness of the recent announcement will make it difficult for them to meet their schedules, although they are not directly involved.

The aircraft program reversals will have a substantial effect on subcontractors, a situation of which both WPB and the War Relocation Commission are aware and they are both giving attention to utilization of subcontracting resources. Regional offices at the industrial agencies will follow through to avoid loss of these facilities for war production and the WMC will advise WPB of any surplus labor in an area which cannot be moved but which could be used for production of essential civilian goods.

Refuses 100,000 Plane Workers—Most of the companies concerned do not look for any immediate decrease in the shift or production will become effective generally during the next 12 months. Nevertheless, Arthur Barker, director of the Production Executive Com-

mission, said it would release some 100,000 aircraft workers immediately and result in the gradual release of an additional 100,000 during the balance of the year.

He noted that the AAF had expedited its study of the change in its program, made possible by the successful invasion of France to facilitate the prompt release of those for war and essential civilian production and to meet the demand for a review of all programs. Barker termed the cutbacks and schedule revision the first example of a long-range forward planning cutback of schedules by any of the procurement agencies.

Planning Problem—It was the opinion of some industry executives that this example of long-range planning made it difficult for the industry to do any long-range planning itself, without advance notice of such changes.

The immediate effects of the program were outlined in *AVIATION NEWS* last week at the time of the announcement.

North America at Dallas appeared to be most immediately and directly affected by the B-24 cutback since the company had just completed an intensive labor drive which produced approximately 3,000 workers. Telegrams had to be sent to those men and women telling them not to report for work. Schedule for the P-51 Mustang remains the same and production of A-1F Mustang will continue, probably at a reduced rate.

Higgins Shuts By—Higgins, with an estimated 9,000 employees, re-

ported he had been advised to stand by for some other war activity and it was possible the number of workers would be increased. Increases will be required at Carlson-Wright facilities at St. Louis, Louisville and Buffalo during the remainder of this year as a result of readjustment of other C-46 production.

Just how much reduction there will be in B-27 output has not yet been determined. The Farmingdale plant has no plans for any decrease before July of next year and the Evansville plant is operating on a full team program until April, although some surplus subcontract work now due at Akron will be moved to Evansville, to relieve a critical manpower shortage affecting late production.

In addition to the B-24 cutback at Dallas, reductions also will be made at Ford's Willow Run plant and at Consolidated Vultee in San Diego, the overall to be from 26 to 14 planes a day.

"Saint X" Missing

Astaire de St. Raphael, French pilot and author of "Night Flight" and "Flight to Arms," is missing in action over France.

"Saint X" had been instructing French and American in aviation in North Africa until he was assigned to reconnaissance work six weeks ago, operating from Italy over the southern French coast. This was the same type of work described in "Flight to Arms," except that it was on the road back.

Coast Plants Study Plans to Ease Strain on Labor in Quick Cutbacks

Convair issues booklet designed to keep men on job till all war needs have been met; returning veterans present problem of job responsibility.

By SCHOLEY RANGS

How to tell 345,000 workers that possibly as many more than 25,000 of them can be used during the post-war transition period is the staggering problem facing the West Coast aircraft industry.

Major aircraft plants on the Pacific northwest were unaffected by War Relocation Commission's Aug. 18 announcement of heavy curtailments of bomber production contracts. But executives in factories from San Diego to Seattle were jolted by the suddenness of it.

Convair Action—Consolidated Vultee Aircraft Corp. issued from San Diego in booklet form and reprinted in their house organ a lengthy statement on "We Face the Future."

It held forth the prospect of a protracted war with Japan and continued need for warplane builders for an indefinite period.

Remuneration of a venerable industrial challenge was the statement's most dramatic statement.

"The most loyal and able workers and supervisors are entitled to future employment. This means just one thing: What do we do today in situations where you will be tomorrow?"

Some companies believe the approach to cancellation labor problems should be made through increased labor unions.

"Unrealistic"—They are the Convair management-worker statement as "unrealistic" in that union contracts and their entirety claims are probably well determined to a greater extent than "loyalty" and "ability" which workers are laid off and which returned on termination day.

A big question mark is labor planning is the returning war veterans.

Approximately 90,000 of them left West Coast warplane plants as military valuations dropped, announced that they will be entitled to their jobs when they return.

Responsibility Questioned—Factory heads now in forced negotiations with labor unions who demand for post-war production of workers' seniority rights must be

considered how to answer, so far, to the veterans problem.

Whether equal responsibility for veterans job problems rests with the industry or with the Federal government is a point still in contention.

The refusal of western aircraft leaders to display any trepidation that recent cutbacks probably induced a new crisis. Having no answer to many questions, they attempted no industry-wide explanations.

North American—The factory hit hardest, North American Aviation Inc., with its B-24 production at Plant "B" in Dallas cut off without warning, turned factory leaders over to the frank statement of dismantled plants so rapidly as they become available.

How North American handled the layoff of 3,000 workers at Dallas during a three-day period, and how the affected workers behaved will be studied by all personnel heads of West Coast factories for future reference.

Currently Convair at San Diego needs more workers—3,000 a month above those being hired to balance the normal quit rate. Douglas still is letting its quit rate absorb the reductions of personnel accelerated by recent cancellations. Ford's workers are in a state of lockout as hiring, but moderately, to replenish production workers and workers of higher skills.

Bendix Backlog Off In First Half of Year

Total \$677,600,000 as June 30 compared with \$1,842,613,000 on same date in 1943.

Backlog of Bendix Aviation Corp. at June 30 totaled \$177,881,000, a reduction from \$1,842,613,000 as the same date a year ago, Ernest R. Breach, president, has disclosed.

Net sales and operating income of other types for the year ended June 30, disclosed to \$4,226,000, compared with \$6,043,148-

412 for the first nine months of the previous fiscal year.

Earnings \$3.74 a share—Net income on this volume was only \$12,159,488, equal to \$3.74 a share after provision of \$63,632,213 for Federal income taxes and estimated prior adjustments under the prorationing law. This compares with net income of \$1,565,901, equal to \$5.47 a share after provision of \$136,951,335 for Federal taxes and estimated prior adjustments for the period ended June 30, 1943. Price reductions for the nine months ended June 30, 1944, totaled \$42,365,434, including reserve provisions during this period of \$30,679,417.

3000 Army Officers To Handle Cutbacks

Group to be assigned to complex task of aircraft contract terminations settlement and property disposal.

More than 3,000 Army officers will be assigned to the complex task of aircraft contract termination, contract settlement and property disposal, with more than 500 already in the field and 400 in training at four schools. The officers will be organized into teams to liquidate the more than 11,000 prime contracts and additional thousands of sub-contracts.

At the announced program of instruction for contract termination units from industry will be conducted over the country to prepare for the heavy cutbacks expected to follow the defeat of Germany. Schools for the civilians will be conducted by procurement districts of the AAF Material Command, while the Army schools are being operated at Vandalia, O., the Radio Advanced General School at the University of Michigan, the Harvard Business School and at the Army Industrial College in Washington.

Preparation for Termination—Civilian instruction courses deal with preparation for termination and outline the steps in the actual termination and settlement process. Since contractors must do the bulk of the work in connection with settlement, it is emphasized by the Material Command that preparation will speed termination and settlement, and that coordinated effort between industrial units and Army settlement teams will be vital in returning industries to peacetime work.



SKYMASTERS ON HOSPITAL RUN:

Wounded and sick fighting men have been flown from remote South Pacific island outposts to Hawaii on daily schedules in Douglas C-54 Skymaster transports which now make up about one-third of the planes on Air Transport Command long-range Pa-

cific run. Photo shows four patients being removed from hospital compartment of C-54 now serving Honolulu ambulance. The planes fly more than 2,000 miles on their route. They are equipped to carry 24 litter patients, or 40 walking wounded.

Study Wing Loading, Stalling Speed Rules

Cost manufacturers divided on advisability of conforming to CAR or seeking to revise regulations for higher figures.

By SCHOLER BANGS

Two philosophies of approach to the tricky problem of raising wing loading and stalling speed restrictions of the Civil Air Regulations are seen in a review of the post-war airliner plans of West Coast factories. Which will accomplish the most remains to be seen.

One group of western engineers and factory executives definitely appears committed to a policy of designing aircraft for the immediate post-war period to conform to CAR requirements as they exist today.

Hope to Revise Rules—An opposing group appears to be dedicated to the belief that the airliner of the future will have higher wing loadings and stalling speeds than today's Civil Air Regulations permit—and is designing and building planes in the hope that their very physical presence will eventually cause government lawmakers to revise the regulations.

Lockheed and Douglas indicate a belief that if CAR changes are desired for some time in the future they can best be won by gradual consent—by the process of "winning friends and influencing people." Lockheed's hopes for sales in the immediate post-war period are based on the Constellation, and Douglas' on the commercial version of the C-54. Both will conform to existing Civil Air Regulations.

Model 38—Leader of the opposing viewpoint is Consolidated's New Aircraft Company whose popular "Model 38" exceeds the CAR 80 mph allowable stalling speed, and also boasts high-wing loading. Today Convair is confronted with the prospect of either modifying Model 38 to conform to the CAR or winning a revision of the government regulations to qualify the airplane for a commercial license.

Although Boeing has given no public indication of its post-war plans, some observers assume that in a showdown it might side with Convair. It is assumed specifically

AVIATION CALENDAR

Aug. 14—Western Pacific Traffic Conference, Los Angeles and Honolulu.
Aug. 15—National Air Transport Association and National Airlines, Honolulu.
Aug. 16—Mid-Pacific Airlines, Honolulu.
Aug. 17—Mid-Pacific Airlines, Honolulu.
Aug. 18—Mid-Pacific Airlines, Honolulu.
Aug. 19—Mid-Pacific Airlines, Honolulu.
Aug. 20—Mid-Pacific Airlines, Honolulu.
Aug. 21—Mid-Pacific Airlines, Honolulu.
Aug. 22—Mid-Pacific Airlines, Honolulu.
Aug. 23—Mid-Pacific Airlines, Honolulu.
Aug. 24—Mid-Pacific Airlines, Honolulu.
Aug. 25—Mid-Pacific Airlines, Honolulu.
Aug. 26—Mid-Pacific Airlines, Honolulu.
Aug. 27—Mid-Pacific Airlines, Honolulu.
Aug. 28—Mid-Pacific Airlines, Honolulu.
Aug. 29—Mid-Pacific Airlines, Honolulu.
Aug. 30—Mid-Pacific Airlines, Honolulu.

Practical—Airline pilots who have flown the hulloos course with CAA officials call it "practical".
Los Angeles airline passengers and air freight users now speed the better part of an hour round-trip Lockheed air terminal at Burbank and civic leaders are left pondering the wisdom of pouring more millions into partly-developed Los Angeles Airport, thirteen miles from the civic center.

In the meantime, San Francisco business men are squawking up private capital for development of several major airport sites, and believe they can get government funds to complete their development in the early post-war period.

Gen. LeMay Heads 20th Bomber Force

Twentieth Bomber Command now is under the command of Maj. Gen. Curtis E. LeMay, whose experience in this war particularly fits him for direction of operations that include handling of supplies to an advanced theater as well as the mission of strategic bombing of industrial targets. This command is equipped solely with Boeing B-29 Superfortresses.

In 1941, General LeMay participated in the establishment of the 20th Bomber Command, which was assigned to the Middle East and Russia, and more recently has been commander of the Heavy Bombardment Division of the Eighth Air Force in England. He takes over command of the Twentieth Bomber Command from Brig. Gen. Kenneth B. Wolfe, now commanding general of the Materiel Section of the Materiel and Service Command.

Rib Air Force Shifted—The transfer of Gen. LeMay was followed by major changes in the organization of the Eighth Air Force, with Maj. Gen. William E. Mumford, Jr., succeeding Gen. LeMay as commanding general of the Heavy Bombardment Division and Brig. Gen. Francis H. Griswold succeeding Gen. Kepner in command of the Eighth Air Force. Brig. Gen. David A. Anderson has been shifted from assistant chief of staff for operations to deputy commander for operations, Brig. Gen. John A. Searland, former chief of staff, now deputy commander for operations, and Col. John S. Alfred, advanced public relations officer deputy chief of staff, now chief of staff.



CONSIDERING PERSONAL AIRCRAFT PROBLEMS:

Members of the Personal Aircraft Council, Aeronautical Chamber of Commerce, at their New York meeting last week. Left to right, seated: Clayton Brubaker, Wagon, James Welch, Consolidated Value, John E. P. Morgan, manager, Personal Aircraft Council, Joseph T. Gearing, Jr., chairman of the Council, Alfred B.

Bennett, Aerocraft, Ted R. Yarnough, Globe Aircraft, standing: Don Plummer, Cessna, Robert Kunkel, Mustang Aircraft, Robert Shaw, Lockheed, William Wilson, Kollett, Wolfgang Langewiesche, aeronautical consultant, Robert Krenig, Lockheed, R. E. Reed, Lockheed, and Carl Friedlander, Aerocraft.

Russia Urges World Air Police Force

Group would be manned by volunteers from nations in international organization.

An international air force that could be ordered into action by the unanimous vote of the four great powers is proposed for discussion at the Dumbarton Oaks post-war conference this week. Proposed by Russia, the air force would be manned by voluntary enlistment from citizens in the international organization.

The Russians, rejecting the idea of an international police force because of technical difficulties, have suggested that an international air force could be ordered into action for warning or punitive measures in a short period of time and that it could be backed up by military sanctions of the countries involved if necessary.

World Peace Also—It could not be used against the four great powers, it is asserted by proponents, because of the provision that it could not be used except by unanimous consent of these powers. Smaller powers, members of the international organization, would not have power to veto the decision of the big four.

The proposal will come before the Dumbarton Conference, at which the United States, Russia, and Great Britain will discuss means of maintaining world peace. China will join the conference later—Russia being unwilling to

join until relations with Japan by stirring with a country not involved in the European conflict.

More Army Contract Flying Schools Close

Twenty-one Army contract flying schools have completed their training courses and another 30 will be closed by Oct. 16, according to the Aeronautical Training Society. Many of the schools have plans for the training, fixed base or feeder line operation.

Schools whose contracts are being canceled by the Army Air Forces are: Thunderbolt II, Phoenix, Ariz.; Free Huff School of Aviation, Free Huff, Ariz.; Palo Alto Airport, Inc., King City, Calif.; Cal-Aero Academy, Ontario, Calif.; Vuelva-Triana School of Aeronautics, Vuelva, Calif.; LeMay Aviation Military Academy, Avon Park, Fla.; Graham Aviation School, American, Ga.; Claydon School of Aviation, Clarksville, Mo.; Missouri Institute of Aeronautics, St. Louis, Mo.; Southern Air Service, Inc., Bessemer, Ala.; Harman Training Center, Bellingham, Tex.; Eastern Aviation School, Houston, Tex.; Coleman Flying School, Coleman, Tex.; Air Service of Texas, Commanche, Tex.; Ryan School of Aeronautics, Armonk, N.Y.; Coleman Flying School (Shawford Division), Stamford, Tex.; Alabama Institute of Aero, Inc., Tuscaloosa, Ala.; Greenville Aviation School, Okla.

Fla., and Georgia Aero Tech, Ala. The final two had previously been announced as closing Aug. 8, but will continue until Sept. 15, 1946.

Paper Work Piles Up On Terminations

U. S. auto industry to give intensive attention to claims in order to expedite jobs.

Paper work on contract terminations as piling up in the aircraft manufacturing industry and the companies are being urged by the government to give quick attention to claims which are not being handled by the manufacturers as fast as the government is prepared to meet them.

Representatives of the AAF Materiel Command and the Eastern Procurement District discussed the situation last week at the office of the Aircraft War Production Control East Coast.

Waste Manufacturers—Col. Edwin R. Smith, chief of the Materiel Command's readjustment division, said that if the manufacturers did not take care of the relatively small number of claims, mostly due to engineering changes, they would not be in a position to take advantage of the "fast, fair and final" methods of settlement set up by the War Production Administration and the Murray-George Act.

Col. Smith's contention that airplane makers were in a dilemma on the thing since they are constantly being urged to speed up

able application for certain components but probably will never become a prime aircraft material.

Fry Sees New Jobs In World Routes

TWA head says free competition would bring him to new pay scale from 6,250 to 15,000; forecasts 425 mph, transport speeds.

The issue between those who favor a single United States air carrier on world routes as opposed to those who want reactivated competition among all American airlines was sharpened last week by Jack Fry, president of Transcontinental & Western Air, who said the chaos instrument policy would stifle the will of U. S. airlines in progress, delay employment of returning servicemen and tend to freeze aircraft design.

Fry said that, if TWA is granted the right to compete in world air transportation, the line would have to increase its payroll from 6,350 to 45,000 employees and would establish 81 new foreign district traffic offices throughout the world. **► Forecast**—Looking into the future of air transportation, Fry envisaged service which will put New York within six hours of Los Angeles-San Francisco, and any point in the United States within a maximum of 24 hours flying time of any part of the world.

Within the foreseeable future, Fry sees speeds of 425 mph to serve business and industry. Fry, with Howard Hughes last April piloted the TWA-developed Lockheed Constellation on a record six hour and 57 minute flight across the country, and the Constellation is scheduled to maintain 30 hours' flying time between any two points on his company's proposed world air route. He added that even greater speed up to 450 mph service would be anticipated from later aircraft as the result of superior American engineering genius and productive skill. TWA proposes to use Constellation in both domestic and foreign service with 15-hour service between Chicago and London.

► Promoted as K. C. Danner—Fry disclosed his views at a dinner in Kansas City attended by several business civic and government dignitaries by the city and the Chamber of Commerce to honor Fry's 10 years of service as TWA president and the line's recent application for a record-the world air route.

As a successor to the Constella-

tion, Fry visualized a transport capable of providing this service.

Kansas City-New York, 2½ hours; Kansas City-Los Angeles, 3½ hours; Kansas City-London, 11 hours; Kansas City-Shanghai, 20 hours; and Kansas City-Calcutta, 24 hours.

► Policy Changes Seem—In aviation circles, Fry's speech was seen as more than a response to an anniversary dinner and there are indications that a number of important changes in TWA policy are in the offing. It was considered more likely that Transcontinental & Western Air would change its name soon to Trans-World, replacing the line's determination to change from the domestic field and fight for a world air route.

Out-of-town TWA directors attending the global airways preview dinner were: Brig Gen Thomas B. Wilson, chairman of the board, Powell Couder, Jr., president, Cressley Bradley Corp., Cincinnati; Col Nelson S. Talbot, district supervisor, M. C. Central Procurement District, Army Air Forces, Military Command, Chicago. Visiting air industry executives included: H. Mansfield Hester, president, United Aircraft Corp.; Sidney U. Stewart, general manager of Hamilton Standard Propellers; Kere Dodge, consulting engineer and president of the Air Defense League, Philadelphia; Leonard Schweitz, general sales manager, Lockheed Aircraft Corp.; Donald C. Heston, Jr., chief, Bendix Aviation Corp., Detroit; John M. Badger, vice-president, Commercial National Bank & Trust Co., New York City; Fred C. Minge, vice-president, the Hearst Publishing Corp., Chicago; Maxwell M. Murfess, publisher, Whelan Eagle, Wichita, Kan.; N. M. Bennett, Airlines Pilot, New York; Charles Klein, treasurer, Mid-Continental Petroleum Corp., Tulsa, Okla.; Donald A. Duff, executive assistant, Continental Air Lines, Inc., Denver; George A. Spitzer, chief engineer, Air Research Corp., Wichita, Kan.; James J. Cochran, account executive, and James E. S. Ellis, president, Arthur Kuhnle Advertising, Inc., New York City. R. L. Reed, Kansas City, Central Region Air Region Division, Railway Express Agency, Chicago; J. E. Schweitzer, vice-president and general manager, Boeing Airplane Co., Wichita Division, Wichita, Kan., and Nelson H. Wood, editor, Aviation News.

Convair's Perelle Joins Hughes Tool

C. W. Perelle, vice-president in charge of manufacturing and a member of the board of directors of Consolidated Vultures, has resigned to become an official of Hughes Tool Co., chief headquarters in Houston, Tex.

Perelle is widely known in the aircraft industry and is one of the



C. W. Perelle

industry's foremost aircraft production men. Forty-one years old, he is one of the industry's youngest top executives.

► Joined Vultures in 1946—He joined Vulture Aircraft in 1946 as superintendent after 14 years with Boeing and in two years was general manager. He became vice-president of production at Consolidated in 1949 and vice-president in charge of manufacturing at Consolidated Vultures following the merger of the two companies.

There was some conjecture that Perelle's switch to Hughes would mean Howard Hughes is making preparations for a serious post-war aircraft production plunge.

New Ear Guard

Navy has officially adopted a new ear protector, an ear wadger, which shields the wearer against the severe noise shocks of gun blasts and the high noise levels of Diesel and airplane engines.

One of the devices, developed by the University of California at Los Angeles and the direction of the National Defense Research Committee, Office of Scientific Research and Development, will begin soon. It is now being produced in small quantities and shipped out to the fleet and Naval installations.

Nelson's 'Spot Authorization' Order First Positive Reconversion Step

Slight trickle of consumer goods expected to come from few plants able to qualify for authorization but Washington observers see move as prelude to action.

While Congress continued its slow, painstaking consideration of reconversion legislation, the War Production Board took the first positive step toward industrial reconversion last week when Chairman Donald M. Nelson issued the long-awaited "spot authorization" order.

Actually the WPB action means little, although a slight trickle of consumer goods may come from the few plants able to qualify for authorization. But Washington observers recognized it as the first step in the reconversion drive.

► Hearing: Continue—Congress showed little or no reaction to the Nelson program for partial reconversion, and continued to hold hearings on demobilization bills. The House-War and Navy Committee began closed sessions on the George unemployment compensation measure which left such a wake of controversy in the Senate last week. This bill provides for state payment of unemployment benefits, with state funds guaranteed by the Federal government.

In the Senate, the Military Affairs Committee took up the Surplus Property Disposal Bill which was reported by Senator Murray, Senator Stewart, and Senator Taft. Surplus property disposal also occupied the attention of the House War and Navy Committee. The reconversion bill, which outlined the authorities of the Surplus War Property Administrator, was not yet introduced. The reconversion bill was not yet clearly defined.

► Bender Leads Attack—Leading the attack was Rep. Bender, who declared that while Will L. Clayton, general administrator, was generally understood to be the man for the job, Congress was without any guarantee of his appointment and that he had heard "Maisy Maxwell, Harry Hopkins and Vice-President Wallace mentioned as possibilities for the post."

But despite the urgency for demobilization legislation created by the military situation in Europe, Congress still appeared more eager

to talk than to act and it was difficult to predict when final demobilization legislation would be enacted. Many industrialists, frankly pessimistic over Congress' slow, drawn-out deliberations, felt that the race between the end of the war and enactment of legislation would be a close one.

► Order Well Qualified—The action of Mr. Nelson was well recognized, despite the fact that the order was thoroughly hedged about by "ifs" and a two-way distribution of authority. In brief, the order permits WPB field offices to authorize production of civilian goods where materials, manpower, and facilities are available and not needed in war production.

Under the order, a manufacturer can file application for permission to produce or increase the production of a civilian item covered by the order. He can qualify only if he has manpower and facilities to carry out the production. It will be the function of the WPB to determine if such facilities can be devoted to the requested production, while the question of whether manpower is available will be left to the War Relocation Authority.

► Few Teeth Left in Order—It was generally recognized that the Army and Navy had sought, with some success, to weaken the final draft of the order, and it was also clear that the reconversion bill, which outlined the authorities of the Surplus War Property Administrator, was not yet introduced. The reconversion bill was not yet clearly defined.

Fully conscious over public reaction to the split in authority on the reconversion order, Mr. Nelson and Paul V. McNutt, chairman of the War Relocation Commission, issued a statement which they hoped would clarify the position of the two agencies. The statement declared that "there is no intent, at all levels, the closest cooperation between the representative of the WPB and the WRA to accomplish these common objectives."

It sounded good, but there were many who were wary to see what would happen when the two

agencies clashed over granting an authorization in an area where the manpower supply was doubtful. The issue would then undoubtedly go to CMBG Director Murray, who already is said to be doubtful of the wisdom of dividing authority.

AWPC's Russell Goes On Consulting Basis

Shift of general manager interpreted as indication that numbers and weight of aircraft called for by the armed forces have reached a plateau.

The aircraft production situation is pointed up by the fact that Frank F. Russell, general manager of the National Aircraft War Production Council, will direct the organization on a consulting basis after Sept. 1, a strong indication that the numbers and weight of aircraft called for by the armed services have reached a plateau.

At the same time, there is an slackening of the industry's effort to increase production of aircraft. A job the industry had demonstrated it is more than capable of doing.

► Backseat Stage Post—Victor Emmanuel, president of the National Council and president of Aviation Corp., in announcing the shift in Russell's duties, pointed out that the aircraft manufacturing industry has passed the backseat stage except for some serious manpower shortages.

Transition problems, he pointed out, such as contract termination and disposal of surplus aircraft or materials, are being handled through the Aeronautical Chamber of Commerce, not the Council, and consequently council members felt that Russell should be permitted to devote most of his time to other business interests.

► Main Problem Solvers—Russell became general manager of the Council in April of 1943, following leave of absence from National Aviation Corp., of which he is president. At the time he took over, as Emmanuel pointed out, the aircraft industry had grave production problems. Most of these problems have been dispipated.

The announcement of Russell's move from the National Council and no other staff changes are contemplated. Russell, 42, is a former secretary and treasurer and has been Russell's right hand man. Henry P. Nelson is materials coordinator and Donald R. Weber, administrative assistant.

Basic Training Contractor Makes Easy Shift Back to Civilian Job

E. Merrill Anderson has all the students his Milwaukee and Fond du Lac, Wis., schools and equipment can handle, after being canceled out of AAF work last March.

By BLAINE STUBBLEFIELD

Here is the case history of an Air Forces basic training contractor, a member of the Aeronautical Training Society, who was canceled out and is already re-established in civilian business.

E. Merrill Anderson's "Anderson Air Activities," at McBrida, Mo., was closed by order of AAF last Mar. 14. Today Mr. Anderson is back at his old stand in Wisconsin, has two schools at Milwaukee and Fond du Lac filed to capacity with civilian trainees.

● Built Along Army Lines—In accordance with the general Air Forces basic training contract program, Mr. Anderson built his school at McBrida on Army specifications, after which the Defense Plant Corp. bought it from him, and leased it back to him on a fixed monthly rental. Included in the DPC ownership was all heavy equipment. Anderson owned all "materials and breakables," such as shop equipment, trucks, tractors, cars, generators, driver and soda-fountain facilities, nearly all of which he sold at a fair price when his school was closed.

The school had about 100 airplanes, all Boeing PT-17's, which were furnished by the Army. It had 75 to 80 civilian instructors, most of whom were in the Air Force Reserve and had 475 civilian personnel, including 16 mechanics, many of whom also were in the Reserve. Students totaled about 300 at all times, divided into two classes of 150 each. The school flew a total of 70,000 hours without a fatality—never scratched a credit. There were several minor accidents. All of the planes were returned to the Army except one that burned on the ground.

● Luck—Anderson admits he has been lucky. For one thing, his school was closed early, before instructors and other personnel had lost any morale due to tapering off

of Army training. His employees were lucky too, nearly all of them walked right into the Air Forces, or got new jobs at other schools and aircraft plants.

Another piece of good fortune was Anderson's pre-war location in Wisconsin, where there is a maximum of restriction on gasoline for civilian operations, and practically no security ban on civilian flying. He had something to go back to.

● Operated Two Schools—Before the war he was operating two schools, one at Milwaukee and one at Fond du Lac. After establishment of his Army contract school at McBrida, Mo., he started training instructors at the two Wisconsin schools for the Missouri cadet school. He also set up a glider school at Astoria, Wis., which functioned exclusively for the Army, and was closed in 1942.

Anderson has moved back into Milwaukee and Fond du Lac and is doing all right. He gets all the gasoline he needs, for the creation or maintenance of flying skills, and enough good pilots. He is paid on a percentage, and he would like some new airplanes.

● His 300 Students—At present he has about 300 students in his two schools, and could accept more if he had the capacity. Students are selected for \$19.54, trained for private license for \$445 including ground school and all air work. There are various rates for various combinations of training. His students come from all parts of the country.

It is obvious that luck is only one of the ingredients in Anderson's business formula. For one thing, he is publicly minded, and he gives personal attention to his advertising. He gets around and sees a lot of people, and they like him, because he is a personable man who listens attentively to



E. Merrill Anderson

what other people say and he talks briefly and to the point.

● Realistic About Plans—Anderson is a pilot and he loves aviation but he has no romantic notions about it. Airplanes can do a lot of interesting things, but he forgets all except those that are practical and reliable. He feels that more people would buy aviation if it were offered to them at the right time and place. For instance, he figured that vacationers have time, money, and the desire to do something different. He set up a couple of training places on floats at a resort lake this summer, advertised his project, and got all the business the planes could handle, and airplanes from all parts of the country.

Knowing that youngsters rarely have enough money to pay for a course of training, he thought of helping them by saving it. He made a deal with a bank to accept deposits in escrow for any person who wanted to start flight training savings accounts. This offer, needlessly advertised, brought inquiries from aviators and service boys and girls in many countries. Anderson has no control over the funds in escrow, depositors can withdraw them at will. If they don't buy flight training from him, he will have helped them to save money anyway.

● Equipment Problem—Anderson hasn't enough airplanes because his business used equipment being sold by the Defense Plant Corp. following shutdown of CAA's War Training Service, a satisfactory for two reasons. First, most of the planes are in various stages of deterioration, and, second, the price is too high. He says these planes are being bid in mostly by inexperienced people who will soon find that they have to spend sev-



Newest ice protection development . . . the electrically heated propeller shoe

WITHOUT PROTECTION, ice formation on propeller blades causes loss of thrust, imbalance, and excessive engine vibration. Then, too, there is the danger and annoyance caused by ice flying off in large chunks and hitting the windshield or fuselage.

It has long been felt that a heated blade covering would be an efficient method of protecting propellers against icing. This type of ice preventer would be particularly well suited for use on long range military aircraft.

Years ago, B. F. Goodrich engineers began development work on a type of blade covering. Today, the electrically heated propeller shoe is a reality

and it has performed amazingly well.

This new ice protection device, containing synthetic rubber, fits over and is cemented to the propeller blades' leading edges. It covers the area of the leading edges, where icing usually occurs. Electrical current from a generator (which may be mounted on the hub) produces heat in the shoe material. A special construction of the shoe concentrates heat at the leading edge, where ice protection is most vital. Efficiency is promoted by directed and bent ventilation at the blade side of the shoe.

The surface of the shoe is smooth, and conforms to the contour of the blade when cemented on. Thus, there

are no irregularities to upset air flow. Because the shoe keeps ice from forming, unbalanced thrust is prevented—imbalance and engine vibration is minimized. The shoe also provides a highly elastic cushion covering for the blade. The B. F. Goodrich Co., Akron, Ohio, is sole agent.

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erial headed dollars on each of them. And when new planes are on the market, the trade-in value of the WTS planes will be very low. In Anderson's opinion, the Defense Plant Corp. is doing harm to personal and professional aviation by unleashing the WTS planes on inexperienced purchasers, and by using a ceiling price formula far above their actual value.

Experience With DPC—He and DPC took three of his airplanes, under the requirement order, in March, 1942, at a price of \$1,400 each. WTS used them till this summer, collecting rental charges from contractors, and then advised him he could get them back by bidding the ceiling price, which was \$1,472. The planes had about 500 hours on them when they were taken, he said, and 1,000 to 2,000 hours, when offered back. He didn't bid on them.

Commenting on Anderson's statement, CAA said, first, there must have been some charges against these particular planes for needed initial overhaul, and that Anderson would have got them back by bidding less than ceiling. Mr. Anderson says he believes that the light plane builders, like Aerocraft, Taylorcraft, Piper, and others, will soon be authorized to go into limited production. But that could happen in private flying might now would be delivery of some new airplanes, he says. Presumably all of the planes at his Wichita schools are Aerocraft.

ATS Opens L.A. Office

Preparations for post-war planning on the part of the West Coast's civilian contract flight training schools are indicated by the opening in Los Angeles of a Pacific Coast information office at the Aeronautical Training Society.

Under the direction of Glenn E. Carter, ATS information division field liaison supervisor of Dallas, Texas, the Los Angeles office represents ten Southern California and Arizona flight academies still active in training military pilots. Five inactive—five other southwestern ATS member schools have been considered temporarily inactive by contract cutbacks.

Carter, who prior to joining ATS last December was chief of public relations and combined instructors representative for the Army and War Department in the Pacific Northwest, and was stationed at Ft. Lewis, Wash., anticipates rapid conversion of the military schools to fixed base operations.

5 Wichita Fields

With the opening of three new fields recently, Wichita, Kan., now has five airports open for private flying and student instruction. These services, plane rental, student training and plane service are provided at all of them.

The fields and their owners are: Earle Hing Service, as the municipal airport, George L. Harbo, Oliver Airport, Arthur Hanks, Rowden Brothers Flying Service field, Gene Rowden, University Airport, Jack R. Thomas, and Wilson Field, Inc., Kenneth Edmister. Two of the airports are on the outskirts of the city and the other three are four to six miles from Wichita.

Air Scholarships For Tenn. Students

280 enrolled in "Education" to get 12 weeks of ground school and 10 hours of dual flight.

Tennessee Bureau of Aeronautics scholarships, equivalent to 12 weeks of ground school instruction and ten hours of dual control flight instruction, will be awarded to some 280 education students in State colleges and universities having access to airport facilities. Each of the seven designated colleges is eligible for 40 scholarships.

W. Percy McDonald, Bureau chairman, and basic aviation training for the future teachers in Tennessee's schools will aid them in teaching air-minded youth. Aviation instruction of the State's teachers has been under experimentation for some time at Austin Peay State College. Response of the participating teachers has been enthusiastic. About 50 percent of those receiving the training have made individual arrangements to qualify as private pilots.

Fixed Assured—The Bureau of Aeronautics, under contract with the State Board of Education and the colleges, will make funds available to cover the cost of the scholarships. The colleges, through their faculties, will provide ground school instruction.

Ground instruction will consist of 210 hours of classroom work covering the following subjects: Civil air regulations, navigation, aerology, recognition of aircraft, color, engines and aerial, values

and problems of aviation, and certain seminar discussions.

Consent for Instruction—The colleges, in consultation with the State Board of Education, will contract with private flying operators for the actual flight instruction of the students. The flight training will consist of dual control demonstrations covering 200 hours in the air, and scholarship students will participate in all phases of flight.

Special credits and certificates will be awarded students completing the courses. Cost of the scholarships is estimated at between \$250 and \$300 each.

Tennessee is known in aviation circles for placing model airplane kits in all of its elementary schools, providing airports for several colleges, utilizing the country's first program for training women as elementary instructors, aiding a research program of the University of Tennessee to improve the art of flying instruction, providing for the first time in this country, funds for maintenance of more than 100 11- and 16-year-old Grif Air Patrol Cadets attending two-week aviation training courses at Army Air Force bases; and operating the first aviation indoctrination course for teachers in the United States.

Fixed Base Operators' Taxes Explained

Federal taxes on persons flown by fixed base operators are explained in a letter to John Wilson, National Aviation Trainer Association, from the Treasury Department's Internal Revenue Service at Kansas City. Under the Internal Revenue Code, amounts exceeding 15 cents paid for transportation by airplane, including amounts paid for sightseeing and pleasure rides, are subject to the 15 percent tax which has prevailed since Nov. 1, 1942, under section 3499 of the Code. The tax covers prices of all and one-half scheduled and non-scheduled operations.

Don M. Nee, collector, Sixth Missouri District, author of the letter, says he is not certain whether the tax applies to airport rides. It does not apply to student instruction, he says. Taxes collected should be reported on Form 707 on a calendar month basis and should be received on or before the last day of the month following that in which the tax is collected.

• NUMBER 21 IN A SERIES TRACING FIFTEEN YEARS OF KELLETT AIRCRAFT HISTORY •



Shadow of things to come

THOUSANDS of men in military, commerce and agriculture are looking forward hopefully to the advantages helicopters will bring in the years that lie ahead.

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How rapidly helicopters can be made ready for

wide use, no one can foresee now. But it is the belief of the Kellett organization that the inherent ability of helicopters to take off and land without forward flight—to fly slowly, or to hover in mid-air—will save time and money in the purling and inspecting of forests, ranches, electric power lines and oil pipe lines, in the spraying and darning of crops, and many more civilian services. Kellett Aircraft Corporation, Upper Merion (Philadelphia), Pennsylvania.

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Eastern Small Port Problems Studied by CAA, Planning Groups

Washington area expected to need about 20 fields to handle the 2,600 to 3,000 aircraft likely to be in operation shortly after close of war.

Dynal study of the Washington, D. C., airport problem by CAA and planning groups in the District of Columbia and adjacent counties in Virginia and Maryland, have already brought up some difficult problems.

If an average of 115 acres is allowed for each Class 1 and 2 airport, and if each field accommodates 100 planes, it would take 500 fields to handle 5,000 planes, or 3,399 acres of land, or nine square miles. Taking a conservative average of one acre of 5000, the land would cost \$1,753,000. Thus the investment in land alone would be nearly 20 percent of the value of the 5,000 planes, estimating their average worth at \$3,500. The 115-acre average is obtained by allowing 75 to 160 acres roughly for Class 1 and 2 fields.

Port Discussions Held—Eric von Hunsdorff, airport planning consultant for the Civil Aeronautics Administration, has held preliminary discussions with the National Capital Park and Planning Commission and with planning groups in Virginia and Maryland. The capital area has a radius ten to twenty miles in various directions.

Mr. Hunsdorff tentatively suggested 30 ports to handle 3,000 to 3,500 aircraft which District residents are expected to own very soon after the war. Some observers estimated that Washington, with a population of 1,000,000, should own nearly more planes than that in a few years. All figures suggested by either Hunsdorff or others are informed guesses at best.

National Plan—Waterway plans are drawing for the capital may approximate the pattern of a national plan to follow. CAA and municipal officials are working also as designers of an airport development for the New York and Philadelphia metropolitan areas. New York is possibly the most difficult ground facilities problem in the world. It contains one-tenth of the country's population in an area of 3,500 square miles. The CAA planning and program will include many regions and cities as soon as the war is over, in the Washington study, and in

others, CAA is considering air transport requirements as well as those of private flying. Interchange of private and airline traffic is one consideration, distribution of the flying population is another, and not the least is simply to assure that personal craft and airlines keep out of each other's way. Final location of any field, or of a system of fields, is an elaborate compromise between many factors.

Noise and Neighborhoods—A primary factor in locating fields around a city is the classification of population sections by noise. Modeling and well-to-do people buy airplanes, and the ports should be accessible to their places of dwelling and business if the land is not too expensive, if the airlines are not likely to run a route over the spot, and a lot of other things.

Farm Planes

Although many studies are being made to determine post-war private flying trends, few have gone into rural areas. But a recent survey indicates that about 100,000 farm planes were involved in buying airplanes than the average city dweller, Dr. F. L. Wain of Wichita University, who annually makes a cross-country survey of thinking in Kansas, found that one out of every 40 Kansas homes is to buy a post-war airplane.

Only one out of every 300 in Wichita is interested, the survey showed, and one out of every 100 in smaller Kansas cities expressed intentions to purchase planes.

Four percent of the war workers, most of them employed in aircraft factories, were of the opinion that they would be able to keep their jobs after the war. One-fourth of those interviewed admitted frankly they had no idea what they would be doing after the war and one out of four were worried about the post-war period.

A very important "if": Will the residents of a chosen airport site accept the new disturbing element? Only a few will fly, but all have to accept the noise and whatever risk is involved. There is no use for a central group in any city or region to make plans without progressive agreement among all interested parties. The cost has to be equitably shared, and the disturbance has to be accepted, in advance, or trouble will ensue.

Distance Factor—In Washington, as in other cities, existing small airports are so far out that many potential flyers do not bother with them. There is no solution in sight for this knotty problem. Many of the proposed fields will be still further—up to 35 miles from downtown.

Difficulties being met afford opportunity for the roadside plane school, and the helicopter school, to mitigate these obstacles in the early ones. The investigation says they have that in mind, and the fields will be needed anyway, in case these become necessary.

Waterways—One obvious answer to manure is the waterplane. In Washington, the Potomac estuary affords excellent take-off and docking possibilities, and these are being considered. Small water planes have never sold in great numbers. Small amphibians being developed, might be popular.

The cost of land, as estimated above, at nearly 20 percent of the value of airplanes, is only part of the airport cost, of course. The total will be much more. But even so, such costs can be good or bad, depending on how you look at it. Many people know \$1,000,000 is \$400 per acre. Point is that the garage may serve for many cars, and the same is true of airports. They are permanent assets.

Presidential Aid—Concerning CAA, investigators are reaching the conclusion that private operation of most small fields, for a long time to come, will produce no profit. They feel that local or Federal governments, or both, will have to participate. A bill now pending before Congress would authorize public financial assistance for airport development.

Opinion was expressed by persons interested in the Washington study that the design of airplanes will have to be modified for limited ground area operation. Many manufacturers, it was said, are flattening the angle of the approach glide, rather than increasing it. Some said, too, that small plane nose must be greatly reduced.

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THE AIR WAR

COMMENTARY

Air-Ground Strategy Balks Nazi Counterattacks in France

Victory pattern, established in Libya and perfected in Tunisia and Italy, is being followed in invasion and may lead to crushing defeat of German armies in western Europe.

The pattern of victory, spelled out in the burning desert of Libya, improved in Tunisia and further developed in Italy, has enabled the Allies to pick up a lag of two or three weeks in their time-table in France, and by breaking through the Nazi lines at several points has opened the way for what may prove to be a crushing defeat of the German armies in France.

That pattern includes the closest possible air-ground cooperation in a forward thrust of troops (phase 1), preceded by counter-air force operations which gain control of the air (phase 2), and counter-attack operations which by smashing bridges, canal barges, roads, rail junctions, locomotives and freight cars prevents the movement of enemy troops and supplies (phase 3).

Phase 2 operations may be summed up in the phrase "isolation of the battlefield." These operations have been so successful that the German strategy of containing the Allied strikes in Normandy to gain time to mount a big counter-offensive, and to perfect their V-2 rocket campaign has been broken. The expected large scale counter-offensive has never materialized.

► **Air Barrage**—The successive breakthrough operations which resulted in the capture of Cherbourg, the rapid engagement of the Breton peninsula, the dash toward Paris via Le Mans, La Meuse and Chartres, and the British-Canadian smash south of Caen were all preceded by terrific air bombardment. Newly developed techniques permit each bombardment to be closer to our own lines than hitherto, enabling the ground troops to follow through quickly in decisive penetrations. That the method has its risks may be freely admitted, but

the final results indicate a saving of time and sufficient saving of lives all out of proportion to the risks involved. Normally, medium and light bombers and bomb-carrying fighters are employed at low altitudes (about 10,000 feet), although on occasion the heavier also are thrown in. Electronic devices permit the air barrage at night or through overcast, other factors often rendering such conditions more satisfactory than when clear visibility prevails.

► **Enemy Armor Bows**—Control of the air enables our tactical reconnaissance aircraft to sweep enemy territory and keep hand-

quarters intimately informed as to the enemy's plans from hour to hour. These Tac/Reco planes are speedy Mustangs, equipped with the latest aerial cameras and also fully armed. Free lance offensive fighter missions are also flown, including Mustangs, Thunderbolts and Lightnings carrying 500-pound bombs under each wing and armed with machine guns and light cannon for strafing, also deadly rocket-propelled Typhoons.

Targets include close-to-the-line ammunition and supply dumps, motor trucks and other vehicles, and enemy tanks. When the latter are discovered, often on their way to the battle lines, the RP Typhoons have a field day. The effectiveness of RP fighters against tanks, discovered with dismay as the Russian front when the Il-2 Sturmovik (called Shturmok by the Germans) went into action as a shocking anti-tank weapon, has been a rude shock to the enemy in the west. In the Asiatic-Pacific warfare the Japs have been making the same discovery in their contact with Army and Navy RP fighters.

► **SUPER AIR FORCE**—The Twentieth Air Force, potentially a global air force with far-reaching implications in the maintenance of



ROCKETS FOR BRITISH TYPHOONS

Armored preparing rockets for rocket-firing Typhoons, which have given the British Army what officers describe as the closest air support of the war. In the early days of the invasion, the planes took off from their airstrip three miles from the front line and under shields.

world power, is speeding up its operations and establishing bases for striking from different directions. Owing to the necessity of partially drying out the Hsiao Sheng strategic quantity of gasoline, oil, bombs and bullets required for missions to targets 1,500 miles away (and more), over three weeks elapsed between the first few missions (see table). With the establishment of a "secret Superperformance base near the Koyator" in the area of the Southeast Asia Command, presumably in South India or Ceylon, the logistics problem has been greatly eased by the use of a port capable of handling heavy shipping. With the strategic key to the Pacific (the Marianas) now almost wholly in our hands, it will not be long before Nippon feels the weight of Superperformance bombs from still another direction. Liberators and Thunderbolts are already operating from these bases. Here again the logistics problem, such as it is from the standpoint of sheer distances, will be greatly helped by the use of the fine harbor at Guam. As the B-29 strength is built up, and later the B-32, Japan's inner citadel is in for blows from the air which may well prove devastating.

♦♦♦♦♦
▲ AIR POWER IN CHINA—Of recently, China has been fighting a desperate war far more than seven years. Owing to a complete sea and land blockade, limited quantities of supplies for aerial defense-offensive operations were flown in over the Hsiao Sheng airway almost at yet grasped by the bow. Over and over again when the enemy pushed on into positions offering a genuine threat of considerable proportions, General Chenmou's flyers went all-out with what they had, scoring proper food and rest, and enabled us the enemy's communications and supplies and turned the tide.

It has only been a frustratingly determined effort, with heavy reinforcements, which has enabled the Jap to capture the key center of Chongking and Hengyang, an advance which the 14th Air Force made extremely costly. The Chinese-American Composite Wing (CAGW), equipped with P-47s and B-24s, has been doing a outstanding job. A western division of the 14th has done some highly effective work with the advancing Chinese troops in Yunnan Province, now pushing on beyond the stronghold of Tengchong to effect a

Superperformance From China		Subsequent Performance
1. Jan 11	Shanghai (China)	Shanghai (China)
2. Jan 11	Tientsin, Korea to Hankow (China)	Hankow (China)
3. July 7	Tientsin, Korea to Hankow (China)	Hankow (China)
4. July 11	Tientsin, Korea to Hankow (China)	Hankow (China)
5. July 11	Tientsin, Korea to Hankow (China)	Hankow (China)
6. July 11	Tientsin, Korea to Hankow (China)	Hankow (China)
7. July 11	Tientsin, Korea to Hankow (China)	Hankow (China)
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junction with General Stilwell's forces at Myitkyna. While tied up with air-ground cooperation, a considerable amount of enemy shipping has been sunk in the Yangtze River and the South China Sea, largely by the use of specially-equipped Liberators and low-flying Mitchell attack-bombers. Coastal ports have also been heavily attacked. The PWs are used mostly, and with excellent effect, as bomb-carrying fighters. The recently-arrived P-51's, with their speed, long-range and fuel economy are a very welcome addition to the total airplane strength, which is probably some 30 to 35 percent greater than it was last spring, and slowly increasing. The 14th is still a small air force, however. Supply is still the acute problem, and the capture of a port is probably the solution.

♦♦♦♦♦
▲ Air Base at Myitkyna—Junction of the Ledo Road with the old Burma Road either over the mountains cutting in above Lanchow or down the valleys cutting across from Rangoon and improvement of the old road will help some, but this is not an immediate prospect. In the meantime it is quite likely that the capture of the strong Japanese of Myitkyna (probably "Mikichuan"), North Burma, will prove a distinct benefit to the capture, together with the bases of Mandalay and Khamti and the capture of the advanced enemy fighter bases northwards toward Fort Hertz removed a definite threat to our air transport routes over the Hsiao Sheng and to our important pump-out plane at Chelou, with many airfields and installations.

Our own fighters are now based at Myitkyna, and as the airfields there are enlarged and improved it may become an important link in the air route itself. It is some 300 air miles from Suifu and about 550 from Kunming. By means of a shuttle run to Chelou, fuel stocks could be built up, and the C-46's and other transports could carry more cargo and less fuel, relieving

at Myitkyna. Another solid advantage lies in the fact that the route from Myitkyna to Kunming-Chungking involves flying over mountain ranges 11,500 to 13,000 feet high, instead of 18,000 to 20,000 as at present. This, and the prospective reopening of a new and improved land route into China should prove to be two substantial benefits from the Burma campaign in date.

Canada May Keep Large Part of RCAF

Sentiment for retention of a large air force after the war is growing in Canada and opinion in Ottawa is that Canada will keep a large part of the present air force which now has 283,000 men and women scattered in units of the Royal Canadian Air Force throughout the world.

Some Canadian authorities believe the RCAF may be much larger than the prewar-time Canadian Army and Royal Canadian Navy, both of which arms are expected to retain larger units than before the war.

♦♦♦♦♦
Large Reserve Retained—Canadian air force officers now being retired are retained as reserve and are subject to recall to active duty. Plans are under way to maintain the air corps established in the colleges and universities similar to the Canadian Officers Training Corps. In addition, the first-year Air Cadet League, which teaches high school pupils the fundamentals of aircraft operation and design, is expected to be retained and operated, as at present, under RCAF.

Schramm Heads 9th

Brig Gen Ned Schramm has been named head of the Ninth Air Defense Command now in active in France. The Command defends the Ninth Air Force fighter bases. General Schramm, a veteran fighter-pilot, who served as a flight commander in World War I, succeeded Brig Gen William L. Stockard, who now heads the Ninth Anti-Aircraft Defense Command.

10th AAF Moves

Headquarters of the Tenth Army Air Force have been moved from Calicut to Amman. The Tenth is operating as a district unit within the Eastern Air Command under leadership of Maj. Gen. Edward C. Davidson.

New Marquette Hydraulic Windshield Wiper



♦ A powerful new hydraulic motor makes it possible to offer a greatly simplified and improved Windshield Wiper assembly. Compared to the earlier models, there are important savings in weight, installation time, maintenance and over-all costs. Convenient installations are easily accomplished. The hydraulic motor, though small, has a high torque, permitting a blade speed up to 400 strokes per minute during flight. It is backed by our long experience in pioneering and producing windshield wipers now used by commercial airlines and on Army and Navy planes.

The Marquette METAL PRODUCTS CO.
 CLIFFLEIGH 12, OHIO

Manufacturers of: HYDRAULIC AND ELECTRIC WINDSHIELD WIPERS FOR AIRCRAFT
 HYDRAULIC EQUIPMENT FOR FUEL SYSTEMS • SOLID STATE FUEL SYSTEMS • FUEL OIL PUMPS
 AIR COMPRESSORS • PRECISION PARTS AND ASSEMBLIES

PERSONNEL



Edward C. Salzman, formerly chief field engineer of Wright Aeronautical Corp. of Paterson, N. J., has been named manager of the sales division of the engine company. As now organized, the engine sales and service activities of Wright will include the

broad division of William B. Burton, but with the administration of these two divisions assigned to individual managers. Wright in 1934, Salzman acted as field engineer and assistant chief field engineer before he became chief of that department in 1938.

Karl Kautzer, formerly assistant director of Civil War Training Service, has been named manager of the aviation section of the Hilliard Corp., Elmhurst, N. Y., manufacturer of industrial clothes and oil purifying equipment.



Jerry Brooder has been named regional traffic manager of Western Air Lines, a leased division, with area offices at Denver. Brooder's appointment follows Western's recent purchase of the controlling stock of United Air Lines, of which he had been vice-president. He is now Western's only regional traffic executive and will have charge of airline offices throughout the region, including the new office in the Brown Palace Hotel in Denver. Brooder has been in aviation for the past 14 years.



Katherine Hardman has been named chief hostess of Pan American-Central Airlines, succeeding Helen Kerner, who has been in charge of hostesses for more than two years. The new chief hostess has been with PCA for three years and after the first two years in Capitol Plaza she was placed in charge of the hostess training school.

Fred A. Koepf, until recently assisting manager of Lark-Bell Co., Pacific Division, Los Angeles, has been advanced to district manager for Northwest Pacific Division territory, with headquarters at Seattle. **George T. Lundquist**, former assistant to the vice-president and sales manager at San Francisco, succeeds Koepf as assistant manager at Los Angeles.



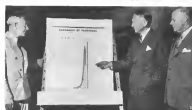
Rosville H. McMahon (photo) recurrent control manager of the public Aviation Corp., has been lent by his company to Aircraft War Production Council, East Coast, Inc., to serve as a coordinator between Army Air Forces and aircraft construction in dealing with surplus materials. McMahon is acting jointly with Henry Nelson of the National Aircraft War Production Council, in seeking effective cooperation by aircraft manufacturers to carry out the purposes of the Metals Reserve plan sponsored by AAF. Under the plan, all government-owned surplus of raw materials and equipment in the hands of manufacturers is reported to Wright Field.

A. R. Skelton has been appointed district manager of the Altonville Division of Consolidated Value Air-



AA INFORMATION CHIEF: **Thomas J. Deegan**, whose appointment as executive director of public information for American Airlines, Inc., was announced (AVIATION NEWS, May 14), will succeed Basil A. Patterson. Patterson will assume other duties in the company. Deegan's headquarters are in American's executive offices in New York. He has been with Johnson and Johnson and has had 14 years' newspaper and public relations experience.

craft Corp., succeeding E. J. McMahon, who is returning to San Diego. **Sheldon Julius Vallin** in 1935 as works manager of the Stinson Division and later was promoted to division manager of Stinson at Wayne, Mich. Bruce joined Stinson. He was president and general manager of Menasco Manufacturing Co., Los Angeles, makers of light aircraft engines, hydrolic and aircraft landing gear. Prior to that he



SPERRY EXPANSION:

Administrative problems resulting from expansion of personnel are described to Herbert Gordon (left), Deputy Minister for Air of Canada, by R. E. Gilman (center), president of Sperry Gyroscope Co., during Mr. Gordon's recent visit to the Sperry Gyroscope Instrument Plant on Long Island. At right is Maj. Gen. Follett Bradley, retired, Sperry executive



Refined in the Crucible of War

Out of the fires of this war emergency products which will help to build a better world. Robin, Panther and the jeep were all in the test tube stage at the war's beginning. Today, they are mainstays of our armed forces. Tomorrow, they will meet broader peacetime needs.

Sturdiness in the field of aviation, the Curtiss Commando emerges as a proven transport airplane. In peace, no airplane of its size would receive such intensive shake-down tests. Often carrying double its normal load, the Commando has been millions of miles under the severest conditions. The invaluable lessons learned have led to countless improvements which make the Commando thoroughgoing dependable and trustworthy—tested and proved in war for man's peace.

LOOK TO THE SKY, AMERICA! Curtiss-Wright Corporation, Airplane Division.

Curtiss Commando



Flipping a bomb squarely onto the nose of a B-29 Superfortress off the coast of New Ireland, a U. S. Navy Consolidated LIBERATOR also brings back dramatic photographic proof of its "bull's-eye" target.

BULL'S-EYE

Good picture — to Americans. Not so good from Fuji's viewpoint. And as each giant, four-engine Liberators "swoosh" again, the day when our boys will be home moves just that much closer.

We here at CECO think of that often . . . for we know that the carburetors and fuel pumps we are building for these great Liberators and other planes are a part of the whole tremendous pattern of Victory . . . a Victory that Americans lose are assuring by their unparalleled courage and skill.

We look forward to more pictures like the one above.



CARBURETORS
FUEL PUMPS
PROTEK - PLUGS

CHANDLER-EVANS CORPORATION SOUTH MERIDEN CONNECTICUT, U. S. A.

AVIATION NEWS • August 21, 1944

was general purchasing agent for Lockheed Aircraft and was with Transcontinental & Western Air, Inc., and Western Air Lines. W. L. Larson has been appointed world manager of the Alouette Division under Sklar. He joined Sklar in 1933. James L. Feltner is chief engineer of the division.

Elizabeth Tania becomes chief flight stewardess for the Latin-American division of Pan American Airways and will supervise the corps of stewardesses now flying on Clippers out of Miami to the Coral Keys, Mexico, Havana and Nassau. Miss Tania has been a secretary with Pan American since 1935.

Capt. A. E. Wilson has been appointed to the fifth engineering department of Procurement-General Airlines after having served in a dual capacity for several months, during which he was assistant chief pilot at the Washington base of National Airport and also acting as flight instructor. Succeeding him as assistant chief pilot for the eastern division of PCA is Capt. J. A. Brooks, who has been in charge of the airline's military transport division. Captain Brooks has completed his duties with the military phase of PCA's military transport division. C. A. Lepore, who has been Brooks' assistant in military operations, has been appointed chief of the Military Traffic division.

Allen C. Chambers is new director of automotive sales for Bendix Products Division of Bendix Aviation Corp. He has been Detroit manager of the company for the past 17 years and will now have charge of both the Detroit and the South Bend offices. He succeeds Frank R. Willis, former director of sales, who will assume full time management of all Bendix Products war-related terminations and settlements. Willis will retain his headquarters at the South Bend plant.

Lawrence E. Aglin has been named sales control manager for United Air Lines at Chicago. He will analyze traffic trends and supervise sales control for United's whole system.

Charles E. Huxley has been named supervisor of military contracts for United Air Lines. United's military contract work includes flights for the Air Transport Command in the Aleutians, across the Pacific and to Alaska; the modification of bombers



ON INSPECTION TOUR:

Lt. Col. Gen. B. M. Glaz, chief of staff of the Army Air Forces (in foreground), and Maj. Gen. Nathan F. Tamm, commanding general of the Fifteenth Air Force, are pictured at a B-24 Liberator Bomb Group of the Fifteenth in Italy, on part of a world-wide inspection tour of Air Force installations by General Glaz.

for the Materiel Command at Chgo., and the training of military personnel. Huxley has been with United since June, 1943.

C. H. Benzene, Alameda Motor Corp., Syracuse, N. Y., has been promoted from constant sales manager to field sales manager. Appointment also was made of the promotion of W. F. Barrows from project engineer to senior project engineer.

Wesley S. Stokell, of the Kansas University aeronautical engineering department, has been appointed head of the newly created Department of Aeronautical Engineering at the University of Illinois. The University plans an aeronautical laboratory and is constructing an 800-acre airport for the new department.

Maj. Walter F. Falkner is appointed to new position of manager of the Phoenix, Ariz., municipal airport at Sky Harbor. He has been in both the U. S. and Royal Canadian Air Force. Because of proposed new development of aviation facilities in Phoenix, the full time responsibility post was authorized. Major Falkner was promoted to inactive status by AAF.

F. L. Wadsworth has been appointed assistant commander of Fleetway division of Kaiser Camp, Inc. Charles H. Morrison has succeeded

Wilmuth as chief accountant and N. A. Lepore has replaced Wilmuth as chief accountant. Wilmuth has served with General Motors and other large concerns.

Veronica Foster is new chief stewardess for United Air Lines at Los Angeles. She has been a staff nurse at St. Luke's Hospital in San Francisco and became a United stewardess in 1943. She succeeded Betty Stafford, who resigned to be married.

Chas. Dixon, administrative engineer of Boeing Aircraft of Canada, Ltd., Vancouver, has returned to his position at Boeing Aircraft, Seattle after finishing his work for the Canadian company.

TELLING THE WORLD

• Society of British Aircraft Constructors, London, has started an advertising campaign in Canadian aviation and general magazines explaining that "since 1935 the British industry has built big aircraft to handle the manifold demands of efficient transport, also produced the world's first four-engine aircraft." It goes on to state that the British aircraft industry will supply the world of experience in design, manufacture and operation of big aircraft to the problems of world transport in peace. The advertisements carry color reproductions of British aircraft bombers.

• George H. Savage, director of advertising and sales promotion at White Motor Co., has been advanced from the rank of captain to that of major in the Civil Air Patrol, and made public relations officer of the Ohio Wing. Prior to his promotion with the position with the Ohio Wing, he was commander of the Cleveland group of CACP. In addition to his CACP connection, Major Savage is a leader of the Rally Band, chairman of the Aviation Division of the Cleveland Engineering Society, and member of the Quaker Reliance, Wings Club of New York, Society of Automotive Engineers and Cleveland Advertising Club.

• Major Frank S. Hines, who was the grandmaster of Tracy, Kent and Co., Inc., advertising, New York, having returned from 16 months' service with the Army Air Forces in Africa, England and the United States.

• The Navy Industrial Incentive Division has available for exchange drawings in war workers a complete file of "Black Cat" as an all-Atlantic film of the Catalina patrol bombers produced in the South Pacific.



B-29 Gets More Factory Space Than Any Single Plane Program

More factory space is being devoted to production of Boeing's B-29 Superfortress than to any other single-type airplane ever built and this manufacturing program, one of the most comprehensive ever attempted in American industry, is now in full operation.

Felt in Japan—Chrysler, General Motors, Goodyear, Hudson, Briggs, Cosma, Murray, A. O. Smith and many other firms from coast to coast are playing a part in this program, the results of which are being felt directly in the heart of Japanese industrial areas.

tion consists of precompletion of major sections of the airplane before final assembly. Boeing, as designer of the Superfortress, was charged with supplying the vast set-up of the manufacturing procedure, engineering and all matter tooling. The B-29 is built at four widely separated points and each builder is furnished innumerable parts by subcontractors from still wider separated points.

Master Gauges—Boeing had the intricate task of furnishing master gauges to each manufacturer and in order to supply these master gauges the company first was required to make control master gauges from which the master could be made.

All major fits and fixtures were designed in Seattle and produced in Wichita. Fabrication tooling was predominantly of Wichita design and manufacture. Some of the fits were the largest ever used in aircraft manufacture.

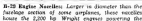
version of the Seattle plant from B-17 production to B-29 output, has not halted the manufacture of the B-17's, although when the conversion is complete, Flying Fortress will continue to be built by Douglas and Lockheed, and all Boeing facilities will be devoted to turning out Superfortresses.

The present four-engine bomber program has placed one-fifth of the aircraft factory space in the United States on construction of Boeing-designed airplanes.


Net income decreased only 4 per cent before reorganization.

Shipments of engines, airplanes and propellers produced by United Aircraft Corp. increased one-fourth in the first six months of 1944, compared with a similar period in 1943, but net income was up only four percent before rearmament. F. B. Herrschler, chairman of the board, declares in a statement to stockholders:

Shipments of the four manufacturing divisions—Pitt & Whitney Engine, Hamilton Standard Propeller, Chance Vought Aircraft and Sikorsky Aircraft—totalled \$419,925,825 against \$333,789,484 last year, up 26 percent. Net income, subject to reorganization, was \$5,494,112, equal to \$3.93 per common share after preferred dividend requirements. Net last year was \$5,120,913, or \$3.61 a share.



VARIABLE DIFFERENTIAL IN




HYDRAULIC VARIABLE VOLUME PUMP

*Makes possible its application
to any system . . . regardless
of conditions . . .*

***Any desired system pressure up to 3000 p.s.i. can be maintained with the LEUTHESSE Variable Volume Pump. The differential pressure can be varied from 50 p.s.i. minimum to any desired "cut in" Both maximum ("cut-out") and minimum ("cut-in") adjustments can be made while the Pump is in operation.**

A typical operating curve of the "cut-in" and "cut-out" cycle is shown below. A close study of this curve will show how the use of LEUTHESSE Pumps makes the unloading circuit superfluous. All of the features of Variable Volume and the unloading circuit are coupled in one, and built into the Pump, which eliminates any ponding in the system.

Maximum heat rise — self-lubricated — unaffected by torsional vibration — quiet at all pressures.



**PISTON TYPE
PUMPS**

7 G.P.M. at 3000 R.P.M.

VARIABLE VOLUME

Compressed 6 1/2" long

Lightweight 9 lbs.

CONSTANT VOLUME

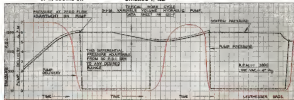
5 1/2" long, 8 pounds

**ALL PARTS ARE
INTERCHANGEABLE**

Leuthesser Bros.

ENGINEERS AND MANUFACTURERS

21 N. LOOMIS ST. CHICAGO 3, ILL.



* A typical cycle is shown above. As the "system pressure" is approached, the flow of oil from the Pump (Pump Delivery) is varied until at maximum "system pressure", the "Pump Delivery" to system is reduced to zero. The point at which "Pump Delivery" to system is resumed is determined by an adjustment on the Pump. This adjustment normally

the selection of any operating pressure differential on any safety feature that has never before been utilized. When the "system pressure" is achieved and the "Pump Delivery" is at zero, the Pump operates against only a slight pressure and delivers a flow of oil for lubrication purposes only through a return line.



... where the going is *really* tough ...

Today Beechcrafts serve in all theaters of war and their ruggedness and ability to utilize small landing fields combined with their high cruising speed have resulted in a demand by the Armed Forces for the maximum possible output of the Beech planes.

Before the war the same outstanding qualities caused the selection of Beechcrafts for such varied uses as the supply and administration of the Hudson's Bay Company's posts within the Arctic circle; missionary work in Borneo; exploration in Colombia; ship-

ranching in Australia; gold mining in Mexico and the Philippines; oil wildcatting in Texas; exploration in the Antarctic with Byrd; and dozens of other projects where efficiency and dependability are valued above all else.

* * *

When peacetime Beechcrafts again will be available not only to those who work at the outposts of civilization but also to everyone else that appreciates top quality and performance.

Beech Aircraft

CORPORATION

BEECHCRAFT ARE DOING THEIR PART

WICHITA, KANSAS, U.S.A.



FINANCIAL

Board of Investigation, Research Releases Study of Carrier Taxes

Report cites comparatively large levies on railroad property, pipelines and special imposts on buslines and traces main aviation taxes to net income, motor fuel and payroll, which represented 92 per cent of airlines 1941 tax bill.

The Board of Investigation and Research (created under the Transportation Act of 1940) has distributed to a limited number of interested persons for criticism a staff report on carrier taxation.

Accompanying the report is a letter by Board Chairman Robert E. Webb, which promises to be of considerable importance in the study of airline taxation now under way by the Civil Aeronautics Board.

Conclusions Summarized—Chairman Webb summarizes the conclusions which he reached from reading the staff report as follows:

"Railroads are relatively heavy taxpayers only in the sense that they are large owners of property and therefore pay relatively large property taxes, in comparison with highway carriers, water carriers, and air carriers. Income taxes, because they are computed on net incomes after deducting interest payments, are relatively low for railroads. From the standpoint of ability to pay (measured by net operating income), railroad taxes are low, compared with other carriers.

"Pipeline carriers are relatively heavy taxpayers, because they are large owners of property and because they pay heavy special pipeline taxes.

"Bus Taxes—Bus carriers are relatively heavily taxed, largely because of high special taxes, multiple state taxation, and because their property taxes are high in relation to the book value of their property.

"Truck and bus carriers pay property taxes which are relatively high in relation to book value. The special 'user' taxes which compare a large part of their tax burden appear to be adequate, on the whole, 30 pay their share of highway costs. In relation to net oper-

ating income, truck and bus carriers are relatively lightly taxed.

"Water and Air Carriers—Water carriers and air carriers pay relatively low taxes, largely because user taxes are not assessed against these carriers to pay for their use of the public waterways and airways.

If such user taxes were assessed, they would have to be passed on to the public in higher charges or the carriers would go out of existence. As is implied but not elaborated in the staff report, the possibility should be considered whether the exaction of such user taxes would force the charges of water carriers and air carriers to such high levels that the value of their services to the public would be lost and the carriers could no longer continue."

The staff report as regards air carrier taxation covers the period 1938 to 1941, inclusive. The scheduled domestic air carriers reported taxes of approximately \$5,000,000 in 1941, the last year of normal operations preceding their mobilization for special war work. In the short period from 1938-1941, tax amounts quadrupled, largely as the result of rapidly expanding operations.

Property and payroll taxes were nearly doubled, fuel and oil taxes nearly tripled, capital stock and gross earnings taxes more than tripled, and net income and excess profits taxes raised to well over ten times the level of those levies in 1938.

There Main Taxes—Principal taxes paid by the airlines are based on net income, motor fuel con-

sumption, and payroll. According to the report, these three taxes alone accounted for 89 percent of the total air carrier tax bill in 1938 and for 92 percent of the total bill in 1941.

In 1938, fuel and payroll taxes were assessed in approximately equal amounts and each accounted for about three times as large as net income taxes. However, all these taxes were of much the same magnitude in the following year, and payroll taxes fell into third position in 1941. By 1941, the survey states, net income taxes amounted to approximately 46 percent of total taxes, fuel taxes amounted to 30 percent, and payroll taxes to 20 percent.

On this point, the staff report states:

"The increasing relative importance of income taxes was the natural result of the emergence of air transportation from an insignificant childhood, in which it depended largely upon air-mail payments for subsistence, into a reasonably prosperous period of adolescence in the immediate pre-war period."

For Airlines—The accompanying table shows ratios of total taxes of all scheduled domestic airlines to evidences of taxable capacity during the period 1938-1941 (percent).

Commenting on the ratios, the staff pointed out that "the tax burden fractions . . . show a rather high degree of stability over the period for which they were definitive. Alas, without exception, the ratios increased from year to year, but the growth was not as pronounced as among some of the other carrier groups. Roughly speaking, governments took, during the period 1938 through 1941, 8 percent of the operating revenues, 30 percent of the income produced, and 30 percent of both net operating and net corporate incomes.

"Here, as in the case of the motor carriers, there was no significant difference between the ratios of taxes to net operating income and the ratios of taxes to net corporate income, there being no large deductions for interest payments and no large additions for non-carrier income."

Ratio of taxes to:	1938 through 1941				
	1938	1939	1940	1941	1942
Total operating revenues (net)	4.1	5.0	5.8	5.7	5.5
Operating revenues (gross)	12.5	15.0	17.5	17.0	16.0
Net operating income (net)	10.0	12.5	15.0	14.5	13.5
Net operating income (gross)	25.0	30.0	35.0	34.0	32.0
Net income (net)	10.0	12.5	15.0	14.5	13.5
Net income (gross)	25.0	30.0	35.0	34.0	32.0

(A set line was indicated by the industry in 1942 year.

National Application Asks World Routes

Seeks to link U. S. terminals with Europe via Bermuda and Azores; other stops listed.

National Airlines last week revealed its overseas expansion plans in an application filed with the Civil Aeronautics Board seeking approval of a proposed link between National's present domestic system and the primary traffic penetrating centers of the Mediterranean basin.

U. S. terminals would be New York, Washington, Charleston, S. C., Jacksonville, and Miami, Fla. From any or all of these points the projected route extends to Europe via Bermuda and the Azores. North African and European terminals and intermediate points listed in National's application include Lisbon, Madrid, Marseilles, Rome, Athens, Cairo, Algiers, Casablanca, Oren, Tunis, Tripoli, Benghazi and Tobruk. These would be linked in a network of routes.

Second Application Filed—National seeks a permanent or temporary certificate to carry mail, passengers and express in scheduled service.

National likewise sought to improve its domestic service by a second application requesting that New Bern, N. C., Washington, D. C., and New York, N. Y., be certified as additional points on National's AM 31. The line has not yet begun service over this route.

Pan American—Pan American Airways asked CAB to approve several requests designed to increase the efficiency of the airline's service in Alaska. Improvements sought by Pan American are:

Cancellation of all intermediate points except Galena on the Fairbanks-Nome route, and McGrath on the Fairbanks-Bethel route.

Mail service on the Fairbanks-McGrath route.

Removal of the local traffic restrictions between Kotzebue and Junes on the Seattle-Junes route.

A new route between Junes and Fairbanks via Anchorage carrying mail, passengers and express.

Elimination of all flag stops on the Whitehorse-Fairbanks route.

Strengthens Alaska Position—CAB approval of these requests not only would improve integration of the carrier's Alaskan system but would also put it in a position to offer strong competition within Alaska and in the U. S.-Alaska traffic.

Moore-McCormack Line, Inc., a large steamship operator, applied for two air routes between New York and Thurm, Iraq, via points in Europe and Russia. The northern route, 6994 miles long, touches

Bowood, Newfoundland; Fredrikstad, Greenland; Reykjavik, Iceland; Oslo, Norway; Stockholm, Sweden; Helsinki, Finland; Leningrad and Moscow, U. S. S. R., and Tchernia, Iraq. The southern route is laid out via Harlingen, Bermuda, Santa, Azores, Paris, Amsterdam, Hamburg, Copenhagen, Stockholm, Helsinki, Leningrad, Moscow and Tchernia.

Steamship Operator—The company has operated scheduled steamship service to the Baltics for



CAA DEVISES AIR MARKING SYSTEM:

The Airways Engineering Division of the Civil Aeronautics Administration has developed a uniform system of air markers to be installed as soon as the Army's base on each province during tests is lifted. Letters and figures 10 to 20 feet high will give pilots place names, latitude, longitude, true north, and the distance and direction of the nearest airport or landing field. Photo shows where the system applied in roads of buildings broad arrow shows nearest airport is 10 miles, 22 miles away. Below is the marking system painted on a highway surface. Small arrow points true north.



TEACHING Army Air Forces Cadets to Fly

The job of the civilian flight contractor is to teach fledgling Army pilots to fly. Aerodynamics, meteorology, engines, navigation, aircraft identification and other related subjects are taught to Army Air Forces Cadets in addition to the fundamental mechanics which every soundly trained pilot must learn.



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a number of years, and seeks the air routes to supplement its surface operations.

Other applications include: Joseph E. Hansen, Stratford, N. Y., for a scheduled mail, passenger and express service via helicopter between Airports City N. J., Washington, D.C., and Honolulu.

Charles E. Tobin and Rosamette A. Anderson, doing business as Lone Star Airlines Co., Marshall, Texas, for a series of mail, passenger and express feeder routes in Texas. Alaska Central Airlines, Juneau, Alaska, for a scheduled mail, passenger and express route between Juneau and Gustavus, Alaska. Applicant now provides non-scheduled service to Alaska from the feeder requested.

North Airlines, Cleveland, Ohio, for feeder routes to Cheyenne, Denver, Nevada, Arizona. This scheduled service would carry mail, passenger and express.

Alaska Airlines for an amendment to its certificate of air carrier operation permitting it to operate between Anchorage and Juneau via Cordova and Yakutat. Applicant claims proved service in Alaska.

James S. Gilliano, New York, for a scheduled mail, passenger and express route between Atlantic City, N. J., New York City, and Providence, Rhode Island. This is a new route, and the Board is given his application special consideration.

Pink Brothers and Doline Brothers, doing business as Bucks Air Line, Poughkeepsie, N. Y., for a Poughkeepsie-Corville mail, passenger and express service via Dutchess County. This scheduled and non-scheduled operations are proposed. Board operates a line like

FAA Opens D.C. Office

Feeder Airlines Association has opened an office in Washington, D. C., headed by Don V. Seever, assistant secretary-treasurer of the organization. Formerly assistant to the president of All American Airlines, only U. S. mail pick-up line operating, Seever has 19 years aviation experience. The

new office is at 1010 Vermont Avenue, N. W., Washington.

Lisbon, Rio Discuss Landing Rights

Portugal and Brazil are reported to be discussing reciprocal landing rights. Such a move would have important implications with respect to American post-war international aviation, and is being watched closely in Washington.

It is understood Portugal took the initiative in the current negotiations. Portugal is situated favorably to become an important gateway to Europe when the war is over.

May Seek U. S. Rights—Having established trans-Atlantic services between their respective countries, Portugal and Brazil might then seek to make it a three-cornered arrangement by applying for landing rights in the United States. In fact, Brazil, according to the Press, do Brazil applications, already has asked this government for landing rights.

In view of Portugal's close ties with Britain, the possibility develops that a London-Lisbon-Africa-Brazil-U. S. operation may be envisaged.

Expand Coast Ports

San Diego has chosen Kenny Moss for a future airport capable of handling runways 10,000 feet long, city officials have revealed. The city now is completing lengthening of runways on the

present airport, Lindbergh Field, which will provide an 8,500-foot runway instead of the too-short 4,500 foot runways by the end of October.

Consolidated Value is providing \$3,100,000 for the Lindbergh Field extension and the Navy will add \$1,500,000.

AA Reports on Rise In Airline Mileage

Airline expansion since passage of the Civil Aeronautics Act in 1938 is shown in the following table of mileage and percentage of increase. The figures were prepared by American Airlines' research department and were introduced at a recent CAB proceeding. Left column shows number of permanently certificated miles added over and above "grandfather" authorizations. Percentage of increase is shown in right column.

	Certified Miles Added	Percent Increase
United Air Lines	110	6.1
Transcontinental & Western Express	104	59.2
American Airlines	101	51.1
Northwest Airlines	97	50.0
Eastern Air Lines	92	47.1
Southwest Airlines	88	44.4
Alaska Airlines	84	42.1
Continental Airlines	80	40.0
Republic Airlines	76	37.7
Western Air Lines	72	35.3
Midwest Airlines	68	32.9
North Central Airlines	64	30.5
Alaska Airlines	60	28.1
Alaska Airlines	56	25.7
Alaska Airlines	52	23.3
Alaska Airlines	48	20.9
Alaska Airlines	44	18.5
Alaska Airlines	40	16.1
Alaska Airlines	36	13.7
Alaska Airlines	32	11.3
Alaska Airlines	28	8.9
Alaska Airlines	24	6.5
Alaska Airlines	20	4.1
Alaska Airlines	16	1.7
Alaska Airlines	12	-0.7
Alaska Airlines	8	-3.1
Alaska Airlines	4	-5.7
Alaska Airlines	0	-8.3



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Chrysler Corporation. Prefabricated timber hulls for artillery harbor tug. **Aluminum Company.** Roof trusses for warehouses and other structures in various parts of the United States. **Defense Plant Corporation.** Roof trusses, other timber members for the construction of plants to produce synthetic rubber—other vital accessories.

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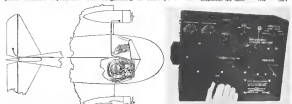
engineering know-how and an ability to fulfill commitments as promised.

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NEW PORTABLE VIBRATION RECORDER DEVELOPED BY CAA:

Designed to supplement the tests made by heavier recorders, the "Ruster meter" shown above was developed by Civil Aeronautics Administration engineers as a portable unit for testing vibrations in an aircraft during flight. Photo shows front panel of the

instrument, with a window through which the operator may observe recorded vibrations on an oscillograph. A camera makes a permanent record of the vibration graphs. Diagram shows how instrument is held on operator's lap during flight tests.

Mexico OK's New Braniff Routes, Increasing Mileage of U. S. Line

Company, granted 3,667 mile operation, is fourth U. S. carrier to enter Mexican operations and second in the last year.

Increasing interest of United States air carriers in Mexican domestic operations is given new emphasis by the granting to Aerovías Braniff of 3,667 miles of new routes by the Mexican Government. Through its president, T. E. Braniff, who owns all the stock of Aerovías Braniff Airways, is the fourth U. S. airline to enter, directly or indirectly, Mexican air operations, and the second to become so engaged in the past year.

United Air Lines last fall acquired a 15 percent stock interest in Línea Aérea Mexicana, S. A. (LAMSA). With Pan American Airways and American Airlines also operating in Mexico, the four U. S. companies control 54,656 of the estimated 94,000 route miles.

► **Mileage 1,725**—The latest certificate given to Aerovías Braniff by the Mexican Government brings its authorized mileage to 7,725. This company was first authorized by Mr. Braniff last January but, with the exception of one small carrier whose routes were incorporated in the system, it has not yet begun operations.

The original grant of 4,661 route miles was for domestic services only, but the newest permits make Aerovías Braniff the first Mexican domestic airline to enter the international field. Envisioned are routes through the Central American countries of Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica to a terminus in Panama.

In addition, service is planned from Mexico through Cuba to Miami and from Manzanillo to Los Angeles. The latter plans require Civil Aeronautics Board approval, while service to the Central American countries and to Cuba is contingent upon granting landing rights by the countries concerned, although Mexican diplomatic sources in Washington are of the opinion that the obtaining of those landing rights must be assured if the Mexican Government has through the given right to the airline.

► **Merger Application Filed**—Although Aerovías Braniff at present is a personal project of Mr. Braniff, eventual plans call for its absorption by Braniff Airways,

the U. S. company. Application for the approval of such merger was filed before CAB in April.

First participation in Mexican air service by a U. S. line began in 1928, when Pan American Airways ran a leg of its international system into Mexico and in addition organized Compañía Mexicana de Aviación, S. A. Although air service previously had been carried as in Mexico, CMA is credited with beginning the expansion of the Mexican air network that today covers roughly 19,000 unduplicated miles by 13 passenger-carrying companies or airlines, according to the latest figures, for May, of the Office of the Coordinator of Inter-American Affairs.

► **Other Holdings**—In addition to its outright ownership of CMA, Pan American also holds small stock interests in Aereo Transportes, S. A. (10 percent), which operates 2,496 miles, and in Aerovías de México, S. A. (18 percent), which operates 4,187 mile Aereo Transportes is a newsworthy while Aerovías has been in existence since 1935.

Aerovías Airlines was the second U. S. carrier to enter Mexico, starting service in September, 1941. Its operations, in contrast to those of the other U. S. companies, are purely international, although it covers 2,519 miles.

LAMSA, now owned by United

Air Lines, is one of the pioneer Mexican carriers, being organized in 1934. It was under U. S. control even before its acquisition by United as its capital stock was chiefly in the hands of G. H. Hurry, an American. Its mileage of 4,187 puts it third, behind only CMA and Aerovías.

► **Mexican Policy**—While Mexico, in common with other Latin American countries, wishes greater participation by its nationals in the development of air transportation, it is receptive to the entry of U. S. interests. At the moment, it puts more stress on the building of an airline system than it does on ownership. And as the State Department has a non-interference policy on the question, aviation sources in Washington regard our southern neighbor as fertile field for development.

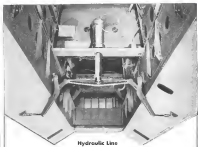
As a consequence, airline operations in Mexico have shown a jump in the four years 1940 to 1943 from 18,148 unduplicated route miles to more than 18,668, from 4,734,898 miles down to 4,668,693, from 2,316,000 ton-miles to 2,093,000. In the same period, aircraft utilization has risen from 1.7 hours per day to 2.7 while number of aircraft employed also has increased from 70 in 1940 to 106 in 1943. Of these 106 planes 23 were multi-engine.

CAB Speeds Hearings On Atlantic Routes

Further evidence of Civil Aeronautics Board's intention to bring international air route applications to hearing as speedily as possible is contained in reports of its examination of the North and South Atlantic prehearing conference.

In both cases, the Board refused Pan American Airways and American Export Airlines pleas for postponement of hearing dates. These dates remain, however, an originally set by the chief examiner—Oct. 16 for the North Atlantic and Nov. 1 for the South Atlantic proceedings.

► **North Atlantic**—The North Atlantic case will also consider extension of American Export's temporary routes from Lisbon to other cities in Europe. The line's original application to serve these points was not considered by the CAB because of the Neutrality Act then in effect, but provision for further consideration of American Export's proposed service to interior Europe when appropriate.



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AIRLINE CONVERSION—PASSENGER AND CARGO:

Two types of installations in C-47's returned by the Army to airlines are shown in the photograph above. Left is the interior of a plane which will be used as TWA's transcontinental "Zig Zag" cargo service. Plywood flooring installed by the Army will remain, wooden bulkheads permit compartmentation

of the cargo. Buckets seats will accommodate TWA personnel or mail. Right, photo shows reconstruction of a C-47 for Chicago & Southern. Fiberglass insulation, replacing kapok, is moisture-proof and fire-proof and also reduces overall weight of the plane by 55 pounds.



22

The Surplus Plane Problem

DURING COMING MONTHS the government will place on public sale several thousand more personal type surplus aircraft. Some 4,000 already have been sold. These planes are being sold on an "as is, where it" basis, and, generally speaking, the purchasers have been satisfied that the basis of sale is fair to all concerned.

There have been rumors, however, indicating that several accidents resulting from poor condition have occurred while newly acquired surplus planes were being flown. While investigation so far possibly failed to substantiate those rumors, they nevertheless serve as a warning, and it is well that they have come at this time. As it is, a thorough investigation of the rumors is being made by responsible authorities and the issue can be fairly and squarely met. If there have been an unusual number of accidents directly traceable to sales of these surplus planes, then those who are directing the sale will be as quick to correct the situation as the entire aviation industry will be in demanding that it be corrected. An epidemic of accidents would be tragic and avoidable. An epidemic of rumors can be equally harmful if permitted to continue.

If, on the other hand, it is found that the ratio of accidents in planes bought from surplus is no greater than in normal flying operations, then the rumors will be false and quickly laid. Responsible authorities conducting the sale of the surplus planes say that they have not heard of any accidents resulting from planes being sold from surplus in poor condition. The safeguards that have been devised appear adequate, but it must be remembered that human failure does not cease simply because a purchaser buys a plane from the government. Under the procedure now followed, the invitation for bids clearly states that the planes are sold in the condition in which they are at the time. It also urges that the prospective purchaser inspect the plane, and for that purpose the government has established sales centers convenient to a majority of prospective buyers. Once the plane is sold, it is inspected by an inspector of the Civil Aeronautics Authority, who must deem it flyable before it can be flown to the home base of the buyer. It then must be brought to full repair before it can be flown again, and a second and more exacting inspection is required. This would seem to be a thorough procedure.

Too much emphasis cannot be placed upon the advice of government officials that prospective buyers of these aircraft read the conditions of sale and inspect planes in advance of purchase, or have a qualified individual do so, for not all aircraft are in proper flying condition and will require extensive repairs before the CAA will permit their flight. Intelligence on the part of government

officials and purchasers will make certain that these additions to the nation's lightplane fleet will be an asset to civil aviation. A few thoughtless and foolhardy persons, however, could do a great deal of harm to flying despite normal precautions on the part of the government.

The major point of those who are bringing up the matter of crashes appears to be a desire to see each of these surplus planes reconditioned under government contract before they are sold. This would place the government in a dangerous position, since it then would be in position of guaranteeing the condition of used planes, a business practice that would violate every sound principle. It would require an enormous overhead establishment and entail the setting up of shops, inspection systems, and a test pilot organization. It would close the repair field to all but those operators fortunate enough to acquire the contracts, creating a privileged class of fixed base operators who would then become virtually a ward of the government. It would stifle initiative in this field, giving the operator with a government contract an assured and, needless to say, expensive income and denying to others the right to obtain business in a competitive market.

Under the present system, the surplus plane must be in flyable condition before it can be flown from the sales center to the purchaser's home base. Generally speaking, it will have been flown to the sales center by a CAA pilot. At the buyer's home base, it must meet the requirements for an airworthiness certificate before it can be flown again. Under this system, fixed base operators and others in the plane repair field do the work anyway. The sole difference lies in the philosophy under which the aviation industry wants to operate. Should there be created a privileged group of repair base operators, or will the industry continue to operate in free competition, developing an even greater future for aviation? The industry will support the concept of free competition leading to stronger business enterprises at thousands of the nation's airports, rather than the choking off of competition and concentration of the work at a few airports at great expense to the taxpayers.

If it is found after thorough investigation that there have been an abnormal number of accidents in planes sold through surplus, then it is the duty of the government to make the sale system and inspections meet the normal requirements of safety. It is to be hoped, however, that the surplus authorities will never countenance the setting up of a tremendous overhead establishment to restrict the growth of sound aviation. That, indeed, would be fatal to progress in private flying.

ROBERT H. WOOD

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